

WHAT IS CLAIMED IS:

1. A recording method for superposing a transfer sheet  
5 having a separable image forming layer on a recording surface  
of a support member to record a pattern including a stripe  
shape and separating the transfer sheet from the recording  
surface of the support member after the recording operation,  
thereby transferring and forming the image forming layer on  
10 the recording surface of the support member like the pattern,  
wherein the transfer sheet separated from the support  
member is held and the support member obtained after the recording  
operation is delivered out, while when the separated transfer  
sheet is returned and superposed on the recording surface of  
15 the support member which is then delivered in, and the recording  
operation is carried out over the support member by using an  
unrecorded section present between recorded stripes of the  
transfer sheet.

20 2. The recording method according to claim 1, wherein  
the held transfer sheet is returned to almost the same position  
as that set before the separation over the recording surface  
of the support member, and the recording operation is carried  
out by shifting a recording position at an arrangement pitch  
25 of a stripe shape corresponding to 1 to 1.5 pitches in at least  
one of a longitudinal direction of the stripe shape and a direction  
orthogonal to the longitudinal direction.

3. The recording method according to claim 1, wherein  
30 the held transfer sheet is returned onto the recording surface  
of the support member with a shift at an arrangement pitch  
of a stripe shape corresponding to 1 to 1.5 pitches in at least  
one of a longitudinal direction of the stripe shape and a direction  
orthogonal to the longitudinal direction, and the recording  
35 operation is carried out in almost the same position as that  
set before the separation.

4. The recording method according to claim 1, wherein the transfer sheet is separated from the support member by using the separating roller and is thus held, and is shifted at an arrangement pitch of the stripe shape corresponding to 1 to 1.5 pitches in at least one of a circumferential direction of the separating roller and an axial direction of the separating roller and is thus returned onto the recording surface of the support member which is then delivered in.

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5. The recording method according to any of claims 1 to 4, wherein when the unrecorded section of the transfer sheet obtained after the recording operation is narrower than a region of the stripe shape to be recorded, the transfer sheet is discharged.

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6. A recording apparatus for superposing a transfer sheet having a separable image forming layer on a recording surface of a support member to record a pattern including a stripe shape and separating the transfer sheet from the recording surface of the support member after the recording operation, thereby transferring and forming the image forming layer on the recording surface of the support member like the pattern, the apparatus comprising:

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25 support member holding means for movably supporting the recording surface of the support member;

transfer sheet supply means for supplying the transfer sheet onto the support member provided on the support member holding means;

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a recording head for recording a desirable pattern onto the transfer sheet in cooperation with the support member holding means; and

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separating and holding means for separating the transfer sheet supplied to the support member holding means and recorded by the recording head from the support member and holding the transfer sheet, while supplying the held transfer sheet onto

the recording surface of the support member which is then delivered in,

wherein an unrecorded section present between recorded stripes of the transfer sheet is used to repetitively carry  
5 out the recording operation over the support member.

7. The recording apparatus according to claim 6, wherein the separating and holding means holds the transfer sheet by vacuum suction.

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8. The recording apparatus according to claim 6 or 7, wherein the separating and holding means is provided corresponding to at least the number of colors of the transfer sheet to be used and holds the transfer sheet for each of the  
15 colors.

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9. The recording apparatus according to any of claims 6 to 8, wherein the separating and holding means is a separating roller for holding the transfer sheet on a peripheral surface  
20 of a cylinder.

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10. The recording apparatus according to claim 9, further comprising a rotating direction position detecting section for detecting a position in a rotating direction of the separating  
25 roller.

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11. The recording apparatus according to claim 9 or 10, wherein a driving source for controlling a rotating angle of the separating roller is connected to the separating roller.

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12. The recording apparatus according to any of claims 9 to 11, further comprising an axial direction moving position detecting section for detecting a position in an axial direction of the separating roller.

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13. The recording apparatus according to any of claims

9 to 12, further comprising an axial direction movement driving section for controlling a movement of the separating roller in the axial direction of the separating roller.

5           14. The recording apparatus according to claim 13, wherein the axial direction movement driving section has stop positions in a plurality of places which are provided apart from each other at a predetermined interval in at least the axial direction.

10           15. A recording method for superposing a transfer sheet having a separable image forming layer on a recording surface of a support member to record a pattern including a stripe shape and separating the transfer sheet from the recording surface of the support member after the recording operation,  
15           thereby transferring and forming the image forming layer on the recording surface of the support member like the pattern, wherein the transfer sheet separated from the support member is held and the support member obtained after the recording operation is delivered out, while when a recording position  
20           of the held transfer sheet is to be detected and the transfer sheet obtained after the separation is to be returned onto the recording surface of the support member which is then delivered in, a returning position of the transfer sheet is changed and superposed based on a result of the detection of  
25           the recording position or is superposed on almost the same position as that set before the separation to change image data to be recorded based on the result of the detection of the recording position, and the recording operation is thereafter carried out over the support member by using an unrecorded  
30           section present between recorded stripes of the transfer sheet.

          16. The recording method according to claim 15, wherein a recording start position and an inclination angle of the transfer sheet are corrected to return the transfer sheet  
35           obtained after the separation onto the support member based on the result of the detection of the recording position, and

the recording position is shifted at an arrangement pitch of the stripe shape corresponding to 1 to 1.5 pitches in at least one of a longitudinal direction of the stripe shape and a direction orthogonal to the longitudinal direction.

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17. The recording method according to claim 15, wherein the held transfer sheet is shifted at an arrangement pitch of the stripe shape corresponding to 1 to 1.5 pitches in at least one of a longitudinal direction of the stripe shape and  
10 a direction orthogonal to the longitudinal direction, and a recording start position and an inclination angle of the transfer sheet are corrected to return the transfer sheet onto the recording surface of the support member based on the result of the detection of the recording position and the recording  
15 operation is carried out in almost the same position as that set before the separation of the transfer sheet.

18. The recording method according to claim 15, wherein the held transfer sheet is returned to almost the same position  
20 as that set before the separation over the recording surface of the support member, and the recording position is shifted at an arrangement pitch of the stripe shape corresponding to 1 to 1.5 pitches in at least one of a longitudinal direction of the stripe shape and a direction orthogonal to the longitudinal  
25 direction, and a recording start position and an inclination angle of the image data to be recorded on the transfer sheet are corrected to carry out the recording operation based on the result of the detection of the recording position.

30 19. The recording method according to claim 15, wherein the held transfer sheet is shifted at an arrangement pitch of the stripe shape corresponding to 1 to 1.5 pitches in at least one of a longitudinal direction of the stripe shape and a direction orthogonal to the longitudinal direction and is  
35 thus returned onto the recording surface of the support member, and a recording start position and an inclination angle of

the image data to be recorded on the transfer sheet are corrected to carry out the recording operation based on the result of the detection of the recording position.

5           20. The recording method according to any of claims 15 to 19, wherein when the unrecorded section of the transfer sheet obtained after the recording operation is narrower than a region of the stripe shape to be recorded, the transfer sheet is discharged.

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          21. A recording apparatus for superposing a transfer sheet having a separable image forming layer on a recording surface of a support member to record a pattern including a stripe shape and separating the transfer sheet from the recording surface of the support member after the recording operation, thereby transferring and forming the image forming layer on the recording surface of the support member like the pattern, the apparatus comprising:

20           support member holding means for movably supporting the recording surface of the support member;

          transfer sheet supply means for supplying the transfer sheet onto the support member provided on the support member support means;

25           a recording head for recording a desirable pattern onto the transfer sheet in cooperation with the support member holding means;

30           separating and holding means for separating the transfer sheet supplied to the support member holding means and recorded by the recording head from the support member and holding the transfer sheet, while supplying the held transfer sheet onto the recording surface of the support member which is then delivered in; and

35           a holding state detecting section for detecting a recording start position and a recording inclination angle of the transfer sheet held by the separating and holding means,

          wherein a position is corrected depending on a result

of the detection obtained by the holding state detecting section and an unrecorded section present between recorded stripes of the transfer sheet is used to repetitively carry out the recording operation over the support member.

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22. The recording apparatus according to claim 21, wherein the holding state detecting section includes an image pick-up camera for picking up an image of the transfer sheet held by the separating and holding means.

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23. The recording apparatus according to claim 21 or 22, wherein the separating and holding means is a separating roller for holding the transfer sheet on a peripheral surface of a cylinder.

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24. The recording apparatus according to claim 23, wherein the separating roller includes a rotating direction position detecting section for detecting a position in a rotating direction of the separating roller.

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25. The recording apparatus according to claim 21 or 22, wherein the separating roller connects a driving source for controlling a rotating angle.

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26. The recording apparatus according to claim 21 or 22, wherein the separating roller includes an axial direction position detecting section for detecting a position in an axial direction of the separating roller.

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27. The recording apparatus according to claim 21, further comprising an axial direction slide mechanism for moving the separating roller in the axial direction of the separating roller.

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28. The recording apparatus according to claim 27, wherein the axial direction slide mechanism has stop positions in two

places which are provided apart from each other at a predetermined interval in at least the axial direction.